ACC.12
61st Annual Scientific Session & Expo
ACC-i2 with TCT innovation in intervention

E1361
JACC March 27, 2012
Volume 59, Issue 13

Imaging

LONG-TERM SAFETY OF A CORONARY COMPUTED TOMOGRAPHY ANGIOGRAPHY-GUIDED STRATEGY FOR ASSESSMENT OF CHEST PAIN IN THE EMERGENCY DEPARTMENT

ACC Moderated Poster Contributions
McCormick Place South, Hall A
Saturday, March 24, 2012, 11:00 a.m.-Noon

Session Title: Imaging: CT - Radiation, Perfusion, Safety
Abstract Category: 24. Imaging: CT
Presentation Number: 1114-643

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Background: Coronary computed tomography angiography (CTA) is being increasingly used in Emergency Departments (ED) for the work-up of patients with low-to-intermediate risk chest pain, however limited data exists on the long-term safety of this approach.

Methods: We prospectively evaluated 532 consecutive patients who presented to the ED between September 2008 and May 2011 with low-to-intermediate risk (TIMI 0-4) ischemic-type chest pain who were evaluated with 320-row CTA after normal electrocardiogram and negative single (267 patients) or serial troponin (265 patients) measurement depending on time of presentation. Patients with previous significant coronary stenoses or revascularisation were excluded. Patients undergoing CTA after single troponin who had no plaque on CTA were discharged without serial troponin measurement and no further investigation. Patients with any plaque and up to mild stenoses were discharged after serial troponin with no further investigation. Patients with moderate stenoses were discharged with outpatient stress echocardiography. Patients with severe stenoses were admitted for invasive angiography. Discharged patients were contacted by telephone and medical records were reviewed to determine safety outcomes.

Results: Mean age was 57±11 years (59% male). 85 of 267 patients (32%) undergoing CTA after single troponin had no plaque on CTA and were discharged after only a single troponin. 437 patients overall (82%) had no plaque or mild stenoses on CTA and were discharged with no further investigation, 21 (4%) had moderate stenoses on CTA and were discharged with outpatient stress echocardiography and 74 (14%) had severe stenoses on CTA and were admitted for invasive angiography. At mean 18.8-month follow-up (range 6-34 months), there was one (0.2%) chest pain readmission, no myocardial infarctions and no deaths.

Conclusion: Triaging low-to-intermediate risk patients with a CTA-guided strategy is safe at long-term follow-up, including patients discharged after a single negative troponin.